

To all interested parties,

I am writing to supplement my earlier comment regarding Broadband over Power Lines (BPL). I have been a licensed

amateur operator for over 12 years, and have held an extra class license for the past several years.

Professionally, I am a consulting engineer in the data and telecommunications field. The arguments regarding

interference to the RF spectrum as a result of BPL are a diverse and well established collection. On the merits of

these arguments alone, I believe the issue should be put to rest, and consideration of BPL as a means of data

transport should be brought to a close. Other considerations, arise when we consider BPL in the long run.

Without discussing noise floors, watts per hertz, uV/meter, or any other technical standard, I can express my

disdain for BPL thus; BPL is the electrical equivalent of receiving the water for our homes from an open aqueduct

run along side the street. No matter how much the water company assures us that "no contamination will get in, and

no leakage will occur" We know this is not the case. Common sense tells us so, because the conduit is not a closed

system.

Electrical mains aren't a closed system, either. There is no shielding, and the conductors are so widely spaced

that, even at the lowest proposed BPL frequencies, a substantial amount of radiation will occur. As the frequency

is increased, the unintended emission from such a transmission line would result in the majority of power being

radiated, rather than delivered to subscribers. The proposed solution to this problem is to raise the amount of

power delivered to the lines, and request an increase in the permitted amount of "incidental radiation".

This is a problem which grows by degrees - in order to get enough subscribers, the initial power input will have to

be in the thousands of watts in all but the highest density urban areas. As more subscribers are signed up, new

sub-carriers will have to be brought on line at higher frequencies. Higher frequencies mean higher loss due to the

poor quality of the transmission lines for this purpose - and the result is another request to increase the

permitted level of "incidental radiation". Eventually, we will have 50,000 watt BPL head-stations if we follow this

logic.

The issue goes so far beyond amateur radio that I will withhold comments on that limited sub-set of spectrum. All

systems which rely on frequencies between 2 and 80 megahertz, and well above (due to harmonic radiation) will be

effected. FEMA, Military, maritime, cordless phones, police, fire, and EMS, to name a few. Additionally, the

effects do not likely stop at communications interference.

What are we getting ourselves into, here? Electric utilities are proposing to operate the equivalent of small

broadcast transmitters, and to feed the output into wires which permeate every residential community. FCC has

already recognized the risks of high energy Electromagnetic (EM) fields, and regulates every radio service to

prevent any type of sustained exposure to such fields. BPL goes in the face of past regulatory action and common

sense - as an amateur, I have to ensure minimum separation between my 100 watt HF transmitter and any inhabited

spaces. Near the network head of a BPL installation, ten times that power will be radiated, yet the spacing from

our homes will be no more than required for my 100 watt radio. Further, this energy is broad band, and occupies a

substantial portion of the spectrum identified as being "most potentially harmful" - from 30 to 300 Mhz.

Worse, while my amateur installation transmits for less than six hours per week (often much less), the BPL signals

will be sustained 24 hours a day, seven days a week, year after year. What we are risking here goes far beyond

radio interference. What will be the health effects of 10 years of constant exposure to such sustained EM fields?

Worse yet, the public does not have a way to opt-out of this experiment. Everyone in a neighborhood with BPL

"Service" will be exposed to these fields, like it or not. It will

be piped into our homes, workplaces, schools,
churches, and everywhere else. This alone makes it unacceptable.

At the root, we must ask why? All this so the electric utility companies can get in on the internet feeding frenzy?

NO. Enough is enough. From my home, I can have a cable modem, DSL, satellite dish, modem, or wireless connection

to the internet. Most urban and suburban areas can boast the same levels of competition in the connectivity market

place now, or will in the near future. Rural areas will not benefit from BPL any more than from DSL or cable

modems, because many of the engineering constraints on maximum distance from the network head are similar, if not

the same. Rural BPL will be as unprofitable as rural DSL or cablemodem, thus the deployment footprints will be

nearly the same. Why should the electric utility deploy in unprofitable areas when the telephone and cable

industries haven't?

After months of consideration, I have yet to find a compelling argument FOR BPL, yet there are a multitude of

arguments AGAINST it. In short, we do not need this technology, and (as a brief review of previously filed comments

reveals) we do not want this technology.

CONCLUSIONS:

If FCC allows BPL, there WILL be interference to most radio based services.

If FCC allows BPL, there will be other consequences to health and safety.

If FCC allows BPL, there will not be greater access to broadband services.

If FCC allows BPL, there will not be a way for the public to opt-out of exposure to the EM effects.

If FCC allows BPL, there will not be a lower-cost alternative to Broad Band,

BPL will just cost us on a different set of scales.

It would seem that BPL is neither safe, practical, profitable, nor popular. Lets put BPL in it's proper place - it

is the Edsel of internet connectivity, and should be retired without further consideration.

Respectfully submitted,

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